

SURFACE ACOUSTIC WAVE FILTER

Publication number: JP2000261276

Publication date: 2000-09-22

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Classification:

- international: **H03H9/145; H03H9/25; H03H9/64; H03H9/145; H03H9/00;** (IPC1-7): H03H9/145; H03H9/25; H03H9/64

- European:

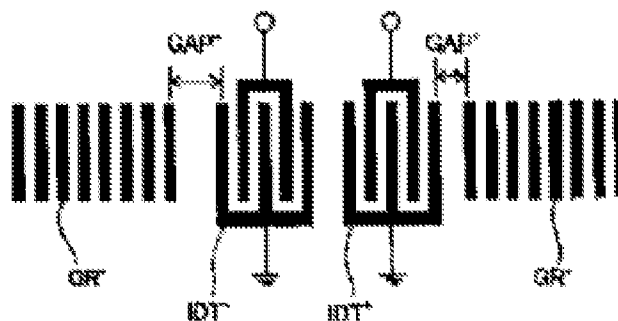
Application number: JP19990057961 19990305

Priority number(s): JP19990057961 19990305

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Abstract of **JP2000261276**

PROBLEM TO BE SOLVED: To easily provide a surface acoustic wave filter, which uses a substrate having natural single-phase unidirectional transducer(NSPUDT) characteristics, especially, a langasite substrate showing excellent characteristics, with a low cost and to make this filter wide-band. **SOLUTION:** A two-port surface acoustic wave resonator consisting of two interdigital transducers for surface acoustic wave excitation and a pair of grating reflectors between which these transducers are interposed is provided on a piezoelectric substrate which has NSPUDT characteristics different by electrode reflection characteristics in the forward direction (+ direction) and the reverse direction (- direction) of a surface acoustic wave, and $GAP+$ and $GAP-$ is set where $GAP+$ is the distance between a reflector $GR+$ adjacent to the transducer in the + direction and the transducer and $GAP-$ is the distance between a reflector $GR-$ adjacent to the transducer in the - direction and the transducer. Electrode finger thickness of the transducer and reflectors is so set that two resonance responses may appear, thereby obtaining the surface acoustic wave filter where the pass band is extended.



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